
Jacob Riis Park Traffic Circulation Study

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Prepared for:

Jamaica Bay Unit
Gateway National Recreation Area
National Park Service

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I. INTRODUCTION

Vehicular and pedestrian traffic within and around a national park can be a detriment to the attractiveness of the park if not handled well. At Gateway National Recreation Area (Gateway NRA) in New York and New Jersey, vehicular traffic is a special concern because of the disjointed nature of the park's property, further exacerbated by the high traffic volumes typical in such an urban setting. Gateway NRA is comprised of three distinct and far-flung units: the Jamaica Bay Unit in both Brooklyn and Queens, New York; the Staten Island Unit in Staten Island, New York; and the Sandy Hook Unit in New Jersey. Even within two of the park's units, Jamaica Bay and Staten Island, multiple separate parcels of parkland exist. At the Jamaica Bay Unit, the unit with the most parcels, improved traffic circulation and safety has been designated a high priority. Currently, several parts of the park are undergoing big changes in terms of use and/or facility construction and rehabilitation. As such, current circulation plans are being reviewed to assess how they meet current needs and whether the plans can adapt to new and/or rearranged uses; revised circulation plans are being developed accordingly. Four park areas of the Jamaica Bay Unit have been selected for traffic circulation review and improvement: Floyd Bennett Field, Jacob Riis Park, Fort Tilden, and Riis Landing. A study for each area presents the existing conditions and potential improvements based on current and planned uses. A fifth study is proposed to discuss directing visitors to the Jamaica Bay Unit and between the different areas of the unit.

The focal point of this study is traffic circulation at Jacob Riis Park, which is part of the Jamaica Bay Unit (JBU) of Gateway NRA that is located on the Rockaways south of Beach Channel Drive and from Beach 141st to 169th Streets in Queens, New York. Specifically, the primary focus is improved way-finding through changes in signage and circulation – for both vehicle operators and pedestrians. Additionally, visitor safety is addressed in terms of driver speed management. Existing conditions are first addressed including the major uses of Jacob Riis Park, roadway and signage conditions, and pedestrian and bicycle facilities. Then the goals for a new traffic circulation plan are presented. Next, a concept plan is presented and conclusions are drawn with both short and long-term recommendations provided to guide the park management in creating an effective traffic circulation system for Jacob Riis Park.

II. EXISTING CONDITIONS

A. Major Park Uses

The historic beach of Jacob Riis Park today hosts a wide variety of recreational activities. These various activities can generally be grouped into the following categories:

- Individual activities, no permit required (walking, biking, picnicking, sunbathing, swimming)
- Individual activities, permit required (fishing)
- Group activities, unguided (baseball, basketball, handball, paddleball, and lay-led activities such as those listed in the quarterly program guides)
- Group activities, guided (ranger-led activities-interpretive and other)
- Special events (for example: Rockaway Music and Arts Council Annual Fall Festival, Sukkot Festival, kite show)
- Pitch and putt golf course concessionaire, food service concessionaires
- Riis Park Visitor Services
- Riis Park support services (maintenance, enforcement)
- New York City Fire Department: Ladder Company No. 171 and Engine Company No. 329
- U.S. Park Police Mounted Unit – horse stables

Currently, Jacob Riis Park's activities border the approximately 1-mile long beach with the Bath House near the eastern end. A wide boulevard (Rockaway Beach Boulevard) separates the beach and other activities from the huge parking lot. Major activity locations are noted on Figure 0 (24"x36" insert).

B. Access and Circulation

1. Access

Today, access to Jacob Riis Park is typically via Rockaway Beach Boulevard or Beach Channel Drive. The former is a boulevard that cuts through the Rockaway neighborhoods east of Jacob Riis Park while the latter is a divided highway paralleling the northern edge of the park. The following list includes the variety of transportation means to the park:

- Travelers coming from Brooklyn and the west have direct access from Beach Channel Drive into the traffic circle that is at the eastern end of the park. Travelers coming from the east on Beach Channel Drive have a circuitous entry to the park that requires leaving Beach Channel Drive and driving through a small neighborhood to reach Rockaway Beach Boulevard. All visitors driving to the park enter the 9,000 space parking lot, parking for a fee Memorial Day to Labor Day (\$4.00 for a standard automobile).
- There is access from the west for private buses, enforcement, and park personnel from Beach Channel Drive just east of the Gil Hodges Memorial Bridge that bypasses the traffic circle.
- Public transit buses (\$2.00 fare each way) pick-up and drop-off passengers in front of the Bath House on Rockaway Beach Boulevard. The buses are equipped with bike racks.
- Weekend ferry service from downtown Manhattan to Riis Landing (northwest of Riis Park on the Rockaways) is being offered on a pilot basis by NY Waterways this Summer at a roundtrip fare of \$26.00. The company and park are also running a shuttle bus to enable visitors to access all of the Jamaica Bay Unit attractions. To further enhance this service, a Proud Partner Transportation Interpreter will ride the ferry and shuttle offering an interpretive commentary on the different parts of the Jamaica Bay Unit and the alternative transportation modes being used.
- Finally, visitors can walk, bike, or skate to the park. From the west, pedestrian facilities (paved bike paths, trails, sidewalks) are available at the northern side (from Rockaway Point Boulevard and Riis Landing) and southern sides of the park (from Fort Tilden and Beach 169th Street).

Although Jacob Riis Park boasted in its day to have the largest parking lot in the world (approximately 9,000+ parking spaces) that could be seen from space, the park is pedestrian oriented – you park your car for the day and leave it. Figure 1 shows a photo of Jacob Riis Park on a busy day.

C. Signage

From a detailed sign inventory and interactions with off-season visitors, this researcher discerned where the park's current sign plan is ineffective. Navigating the Jacob Riis Park main parking lot and all the activities can be confusing, mostly because of the wide-open spaces. On a busy day with many cars in the parking lot, it can take a newcomer a long time to find his or her car because there are few landmarks within the 9,000-space lot. Outside the parking lot, the beachfront is again potentially difficult for an infrequent visitor to navigate because it is about one mile long so one cannot see all the activities. In summary, the two most common reasons visitors may not arrive at their destination by following the signs are the following:

- too much distance or too many decision points (intersections) between the last sign and next sign listing a particular location, or,
- no sign or obvious indicator that the correct location has been reached.



Figure 1 Jacob Riis Park – Top: Aerial photo. Bottom: Viewed from the south on a busy weekend– beach in foreground, parking lot in background.
(Photo reprinted from an FTA report, date unknown)

As part of the discovery process, Jacob Riis Park was inventoried for signs, pavement markings, roadway and pedestrian facilities to determine the existing conditions of the site. Detailed in Appendix A is the comprehensive listing of transportation-related signage for Jacob Riis Park. Within the appendix are the Sign Survey and Inventory forms (Form 10-47) tailored to this project's needs and filled out with the essential data for the circulation study. In addition, please refer to the accompanying map of Jacob Riis Park (on a 24"x36" plan sheet titled Figure 0 Existing Sign Plan) whereupon the sign locations are noted and can be matched to the "SIGN NUMBER" category on the forms. A total of 182 signs were found and inventoried with some sign locations having multiple signs on a post.

If the current signing plan for Jacob Riis Park is maintained, then the faded signs require replacement. In addition, changes in signage are necessary to safely route visitors through the park because:

- no map of Jacob Riis Park was posted outside,
- activity locations and their relation to where to park in the main parking lot are not indicated near the parking lot entrance causing visitor confusion (golf, basketball, swimming bays, baseball fields, picnic areas) while the parking booths are only staffed Memorial Day to Labor Day,
- except for the bikeway, no pedestrian-oriented directional signs were on-site and several activity locations are not signed – for example, a Visitor Contact Station is located at the base of the Formal Gardens in line with Bay 10, but someone in Bay 1 may have no idea it exists,
- several signs are too small to read until a driver is within 10 to 15 feet of them in the parking lot, and finally,
- pick-up and drop-off areas are not designated and many driving visitors hold others up by pulling over and unloading at the entrance to the parking lot, blocking the parking lanes and creating an unsafe condition since the entrance curves out of view and there are no sidewalks there.

D. Condition of Pavement and Markings

In the main parking lot, it is evident that upkeep of the concrete slabs has been less than ideal with grass and weeds growing between several of the large cement concrete blocks that make up the paved surface. Evidence of cracking and chipping, in addition to uneven settling and separation between these pavers, was also observed. Federal Lands Highway has a project scoped to replace 125 of the most damaged concrete blocks.

Rockaway Beach Boulevard's pavement within the park boundaries is in excellent condition. However, there are few pavement markings. Lanes and shoulders are not striped, sometimes leading to chaos in the summer because each side of the boulevard is approximately 30 to 40 feet wide and drivers begin creating their own lanes.

E. Pedestrian and Bicycle Facilities

Pedestrian walkways range from fair to excellent condition. As can be seen at the bottom left of Figure 2, the sidewalk is in fair condition at the northern edge of the Formal Gardens. In contrast, the boardwalk is in good condition most of its length, as shown in Figure 3.



Figure 2 9,000-space Parking Lot at Jacob Riis Park, viewed from the northeast.
(Photo by A.Demers, 2002)

Bicycle riders at Jacob Riis Park can ride on their own bike path. At the base of the Gil Hodges Memorial Bridge at Beach 169th Street, a bikeway traverses outside the northern edge of the pitch-and-putt executive golf course concession to the Formal Gardens at Jacob Riis Park. This is an ideal starting point as it continues bike facilities (on-road lanes are striped on Rockaway Point Boulevard) and is across the street from a public transit bus transfer point. The bikeway is in good condition, except for the lighting in this section. A bike route is further signed through Jacob Riis Park south on Walk “L” (the east side of the Formal Gardens), then east on Walk “N”, and continuing on the Rockaway Beach Boulevard South Sidewalk. Please refer to Figure 1 to see the bike route.



Figure 3 Pedestrian Facilities at Jacob Riis Park – Boardwalk

(Photos by A. Demers, 2002)

F. Lighting

The park is typically open between dawn and dusk therefore, lighting was less of a concern and not fully evaluated, but the following observation was made. A few locations, including parking areas and the

bikeway, could benefit from good lighting especially since some scheduled events extend past dusk. The bikeway has lighting along it; however, some of the fixtures are damaged while others are missing bulbs.

III. CONCLUSIONS / RECOMMENDATIONS

In this report, the existing conditions at Jacob Riis Park were discussed in relation to the park's transportation system. Deficiencies and opportunities in the current system were pointed out and are now addressed through the creation of one concept plan and the following recommendations that offer ideas on how to improve both vehicular and pedestrian flows with one eye on safety and the other on wayfinding. Four sections are included:

- ☞ Immediate Actions – those that can be quickly implemented this summer
- ☞ Long-term Actions – actions that over the next 3 to 5 years can be implemented as the UniGuide program comes online and monies are made available for funding improvements
- ☞ Proposed Shade Structures for Transit & Activity Centers – samples of lively and functional structures that push forward the concept of Jacob Riis Park being “A Beach and Much More”
- ☞ Sample UniGuide Signs – samples of useful signs for the Jamaica Bay Unit as a whole that are part of the UniGuide's chapter entitled Catalog of Standard Signs. These can be some of the first signs the Unit orders and posts.

A. Immediate Actions

- ❖ Post maps of Jacob Riis Park at the following prominent locations:
 - In front of the Bath House, near the bus loading and unloading area. Not parallel to road, angled.
 - South of the Formal Gardens, near the Visitor Contact Station.
 - At the intersection of Walk “F” and the main parking lot. Place just inside the parking lot.
 - At the tunnel entrance in the main parking lot.
 - If part of the parking lot is converted to fields, then a map should be centrally placed, such as between the baseball fields and soccer fields in the paper concept.
- ❖ The park maps should show, at a minimum, the following: You are here, parking, names of all walkways and streets, swimming bay numbers, stairs, ramps with showers, bathrooms, water fountains, telephones, Police, EMS, all major activity areas (picnicking, ballfields [number the fields], playgrounds), transit/shuttle pick-up/drop-off stops and routes within park boundaries, bike route and bike parking, a north arrow and approximate scale. Following the UniGuide, an aerial photo that is labeled is best, however, marked up plans may be useful in the very short-term.
- ❖ Post signs at the parking lot entry directing drivers to the right or left set of parking booth lanes depending on where they are headed in the park. For example, Bay 1 to Bay 3 beachgoers can be directed to the far right while fishermen can proceed straight ahead and golfers can be directed to the far left. Similarly once past the parking booths, signs need to be posted that again direct drivers to the proper areas of the parking lot.
- ❖ Add a curb cut and ramp for the bike trail at Beach 169th Street.
- ❖ Fix all light fixtures along the bikeway and install light bulbs where missing.

B. Long-term Actions

❖ General traffic circulation and safety improvements:

- Pavement and pavement markings are of concern. For traffic and speed management at Jacob Riis Park, work with the NYC Department of Transportation to stripe Rockaway Beach Boulevard within park boundaries. Two travel lanes and a bike lane can be striped with room to spare. A raised crosswalk of pigmented, brick-stamped concrete is recommended for the Walk “E” crossing which is the busiest at the park. A similar crosswalk is recommended for the Walk “D” crossing if the tunnel is not restored; tunnel restoration is far preferable from a traffic safety standpoint.
- A good pedestrian network exists that is in fair to excellent condition. As funds become available, retrofitting the sidewalk system to add wheelchair ramps at all intersections is recommended. Also, a sidewalk network fully around the interior edge (perimeter) of and through the main parking lot is recommended to further break up the lot into smaller, safer areas.
- Main parking lot general improvements:
 - Repave and restripe the parking lot. This is part of a FLH project scope.
 - Add more islands to break up the open space to decrease speeding while creating smaller, more manageable parking areas. Plantings on the islands further improve aesthetics, slow traffic, and decrease heat islands.
 - Add parking stops for heavily used areas of the lot.
 - Sign where to park for which part of the park one is visiting. Posting signs or flags high up (signs atop approximately 15-foot high posts) similar to the flags at Fort Tilden that just show the activity symbol may best accomplish this directional signing.
 - Consider changing the lot configuration to one-way traffic flow to decrease driver decisions.
 - Parking lot exit recommendation: The exit is currently signed well, but not configured well. There is a gore striped area marked for no parking at the guardrail separating incoming and outgoing traffic. It is recommended that a walkway or grassed area be added here with a wooden guardrail paralleling the current guardrail, but on the opposite side of the exit lanes, thereby defining a channel for drivers to exit through.
 - Plantings are recommended throughout the parking lot to reduce the heat islands, slow traffic, and if the ball field concept is pursued, offer ball players and spectators’ relief and protection from the sun. Moreover, shade structures are recommended near most of the picnic areas and ball fields.
- Add more bicycle parking. For example, along the Rockaway Beach Boulevard South Sidewalk near the bus loading and unloading area directly in front of the Bath House.
- If the ferry service from Riis Landing becomes a heavily used service, then it may be desirable to cut an overflow parking area out of Jacob Riis Park’s main parking lot. The plans have a proposed 200-space parking lot shown at the northwestern end. A separate entrance/exit with a parking booth could be installed on the main parking lot perimeter near the Formal Gardens or ferry tickets could be sold at the main parking booths that drivers must use to activate gates for the ferry lot from within the main lot. A small shuttle could either loop into the ferry lot or wait outside of it to bring passengers to Riis Landing.

❖ The signage plan can be modified to improve the visitor experience through better wayfinding.

- Individual walkways should be labeled. Name all of the walkways using a common theme, such as famous journalists or famous New Yorkers. For example: ..., Robert Moses Way, Nelson

Rockefeller Way, and Peter Stuyvesant Way, Further, be careful to go in ***alphabetical*** order so people can recognize the trend and change the designation when oriented North to South versus East to West (such as “Way” for N-S and “Walk” for E-W). Naming on the maps and alphabetizing them improves retention of location and will assist families and friends trying to meet up with one another. UniGuide sign types: SN-1, SN-2, SN-3

- Small signs should be posted at each major activity. For example, during my fieldwork I noted that the playground is not obvious from the beach because tall shrubs surround it. Symbols only or symbols and text can be used. UniGuide sign types: FI-1H, FI-2H, FI-3H
- Improved traffic circulation on Rockaway Beach Boulevard is anticipated by early directional signing of the main parking lot and pick-up/drop-off areas. Since the western end of Rockaway Beach Boulevard (west of the second turnaround) is often blocked off in the summer, I recommend designating part of the bus pull-out area in front of the Bath House as a pick-up/drop-off area for automobiles. Five signs have been proposed on the plan:
 - On Riis Park exit from traffic circle: “Pick-up Drop-off Stay Left, Parking Stay Right” UniGuide sign type: UniGuide sign type: RG-10 or MUTCD sign
 - Westbound on Rockaway Beach Boulevard past parking lot diverge: “Pick-up/ Drop-off U-turn symbol” UniGuide sign type: RG-10 or MUTCD sign
 - Sign the bus unloading/ loading area for both automobiles and buses by designating 80-100 feet of the west end for automobiles, “15 Minute Parking, Loading/ Unloading Only, parking symbol,” and 160-180 feet of the east end for buses, “Jacob Riis Park Bus Stop, Jamaica Bay Route, Free Shuttle, bus symbol” and the standard NYC MTA bus stop sign with route and schedule information. UniGuide sign types: PY group, SS-1
 - Just west of the easternmost turnaround on Rockaway Beach Boulevard it is recommended that a sign be posted on the median: “parking symbol, arrow left” UniGuide sign type: RG-8
- Improved traffic circulation before and after the parking booths is anticipated with the addition of the following signs:
 - On diverge to parking lot: “Parking/ Bays 4-14 Golf Stay Left, Bays 1-3 Stay Right” UniGuide sign type: RG-10 or MUTCD sign
 - After the parking booths on the right (east) side: “Bays 1-3, arrow right” UniGuide sign type: RG-1
 - After the parking booths on the left (west) side: “Bays 4-14, arrow right” UniGuide sign type: RG-1
- Tour bus/ franchise bus loading and unloading is recommended at the western end of Rockaway Beach Boulevard. The buses can enter the park near the Formal Gardens, making the location private and separate from the shuttle and transit buses. Two signs are recommended, one for each end of the designated area. Each sign should state: “30 Minute Parking, Loading/ Unloading Tour Buses Only, arrow to show boundary, bus symbol.” This sign is a combination of two UniGuide signs: PY-843 and PY-851.
- The grasslands or dunes at Bay 14 can be interpreted and protected using UniGuide sign PR-443:

❖ **Traffic circle sign improvements:**

- Work with the NYC Department of Transportation to change Signs # 181 and # 182. They currently read: “Riis Park/ Right Two Lanes”. They should read: “Riis Park/ Right Lane”. This change is especially important on Sign #182 because two lanes are striped from Beach Channel Drive, merge with a single lane traffic circle to two traffic circle lanes and an immediate single

lane diverge branches off from the traffic circle into Riis Park. Signing for two lanes to Riis Park is inaccurate and causes further confusion in this tight weaving section, especially for people currently in the traffic circle.

- Request NYC DOT sign which sections are a single lane and which sections are two lanes.
- Discuss design of traffic circle with Federal Lands Highway and NYC DOT to improve safety. The YIELD signs at the east and north sides of the circle are atypical, YIELD signs are usually placed on the legs leading to a traffic circle, not within it. In addition, it is inconsistently striped with some sections having 2 lanes and others having only 1, again, it is uncommon and safety may be improved by consistently having 2 lanes around the traffic circle.

❖ **Environmental and aesthetic recommendations:**

- Add water fountains to the eastern boardwalk (Bays 1-6). I noted no outside water fountains east of Bay 7.
- Redesign the main parking lot to reclaim some of the pavement for green space. The concept plan presents one way to arrange popular ball sports in a compact area that aids in breaking up the parking lot. I think the option is best suited to switching between active ball fields and overflow grass parking. However, the park may prefer other green space uses such as gardens or return to grasslands/ dunes. In these cases, it is recommended that the north third of the parking lot be reclaimed with a few walking trails for fishermen heading to Rockaway Inlet.
- Balance the appearance of the Bay 7 to Bay 14 section of the boardwalk by adding a landmark such as the clock at Bay 7's semi-circle to Bay 14's semicircular section.

C. Proposed Shade Structures for Transit & Activity Centers

Here are samples of lively and functional structures that push forward the concept of Jacob Riis Park being “A Beach and Much More”. They are fun, colorful, and contemporary. Most of all, they provide much needed shade at park.



Figure 4 Permanent Shade Structure Ideas Recommended for the Drop-off/ Pick-up Area in front of the Bath House.

Reprinted from various websites with GSA accounts.



Figure 5 Temporary Small Shade Structures for JBU Shuttle Stops, Ferry Landing
(awnings removable in off-season, many color options). Reprinted from various websites with GSA accounts.



Figure 6 Shade Structure Ideas for Picnic Areas
(awnings removable in off-season, choose your color, pattern). Reprinted from various websites with GSA accounts.



Figure 7 Shade Structure Ideas for Lining Some of the Ball Fields – for Spectators, for Team Areas

(awnings removable in off-season, choose your color). Reprinted from various websites with GSA accounts.



Figure 8 Shade Structure Idea for Playgrounds, Wading Pools

(awnings removable in off-season, this one is in a butterfly shape, whimsical). Reprinted from website with GSA account.

D. Sample UniGuide Signs for Entire Unit (non-traffic)

The following signs are examples of useful (non-traffic) signs for the Jamaica Bay Unit as a whole that are part of the UniGuide's chapter entitled Catalog of Standard Signs. These can be some of the first signs the Unit orders and posts. All traffic oriented signs are sketched on the proposed sign plan for Jacob Riis Park (Figure ____).

- 1 Figures 9, 10, and 11 are dune interpretive and protection signs that can be posted at Jacob Riis Park and Fort Tilden.
- 1 Figures 12 and 13 are signs for swimming safety. These are appropriate for Jacob Riis Park during the off-season and Fort Tilden year-round.
- 1 Figures 14 and 15 show warning signs for ticks and poison ivy. We have a similar poison ivy sign posted at the Wildlife Refuge already. These signs are appropriate for the trails at Fort Tilden and the Wildlife Refuge.
- 1 Figures 16 and 17 are two examples of protection signs for the piping plover that could be posted at Fort Tilden and Breezy Point.
- 1 Figure 18 is a protection sign for meadow restoration that could be modified for the G.R.A.M.P.S. area as grasslands restoration.

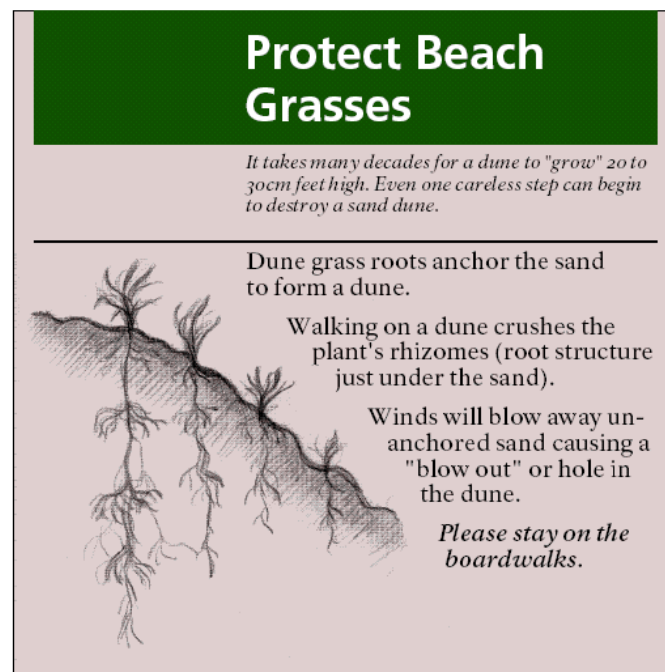


PR-446

Figure 9

Dune Protection Sign.

Almost perfect for Jacob Riis Park, just remove the last line and modify the bike rule to summer season restriction only



PR-443

Illustrations for these panels are currently being prepared and will be inserted in the final version of this manual

Figure 10

Dune Protection Sign.

Good for Jacob Riis Park dunes, can modify for other dune areas.



MP-686

Figure 11 Dune Protection Sign.
Third possible dune sign.



SW-488

Figure 12 Swimming Warning Sign.
For Fort Tilden Beaches

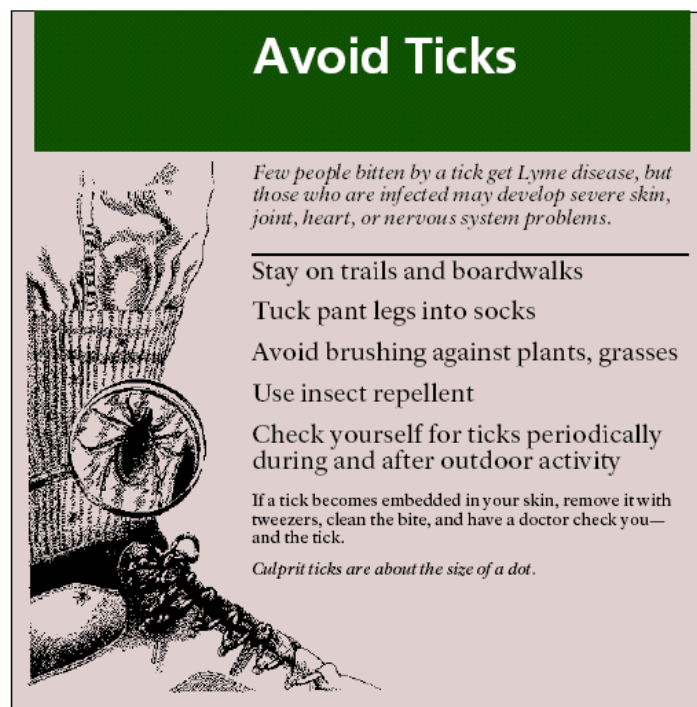


SW-487

Figure 13

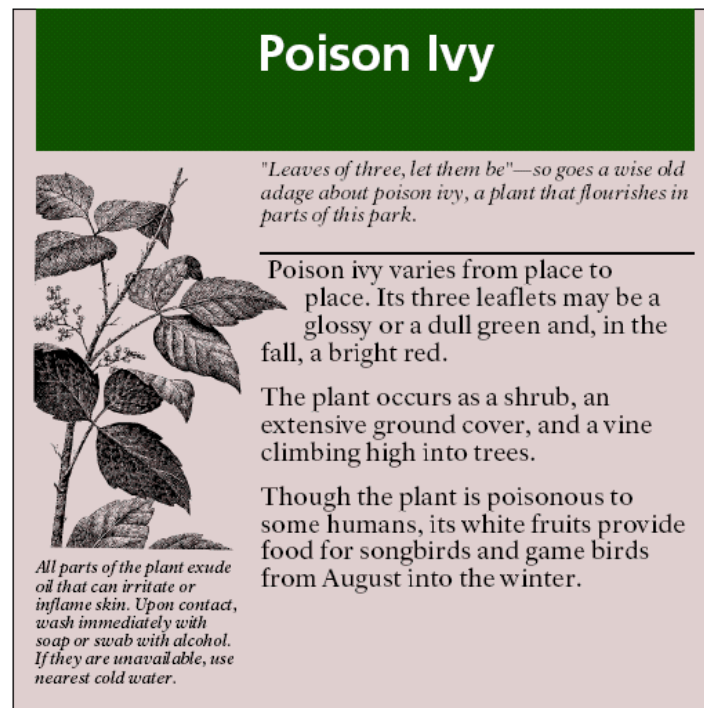
Swimming Warning Sign.

For Jacob Riis Park Beaches during the off-season



PR-435

Figure 14 Tick Protection Sign for Fort Tilden and Breezy Point



PR-440

Figure 15 **Poison Ivy Protection.**
Post at Fort Tilden on the trails to the batteries, Wildlife Refuge



MP-685

Figure 16 **Piping Plover Protection.**
For Breezy Point and Fort Tilden.

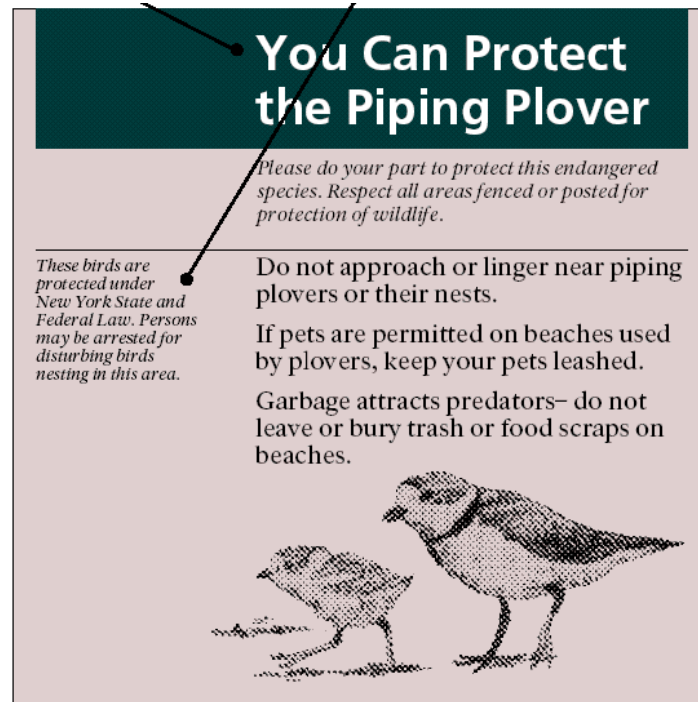


Figure 17 Alternate Piping Plover Protection Sign



PR-438

Figure 18 Modify this typical sign for "Grasslands Restoration" to post at Floyd Bennett Field

IV. APPENDICES

A. Appendix A: GUIDE SIGNAGE WITHIN JACOB RIIS PARK (Existing)

B. Appendix B: GUIDE SIGNAGE WITHIN JACOB RIIS PARK (Proposed)

Appendices are available upon request.

Appendix B GUIDE SIGNAGE WITHIN JACOB RIIS PARK (Proposed Plan)

